

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

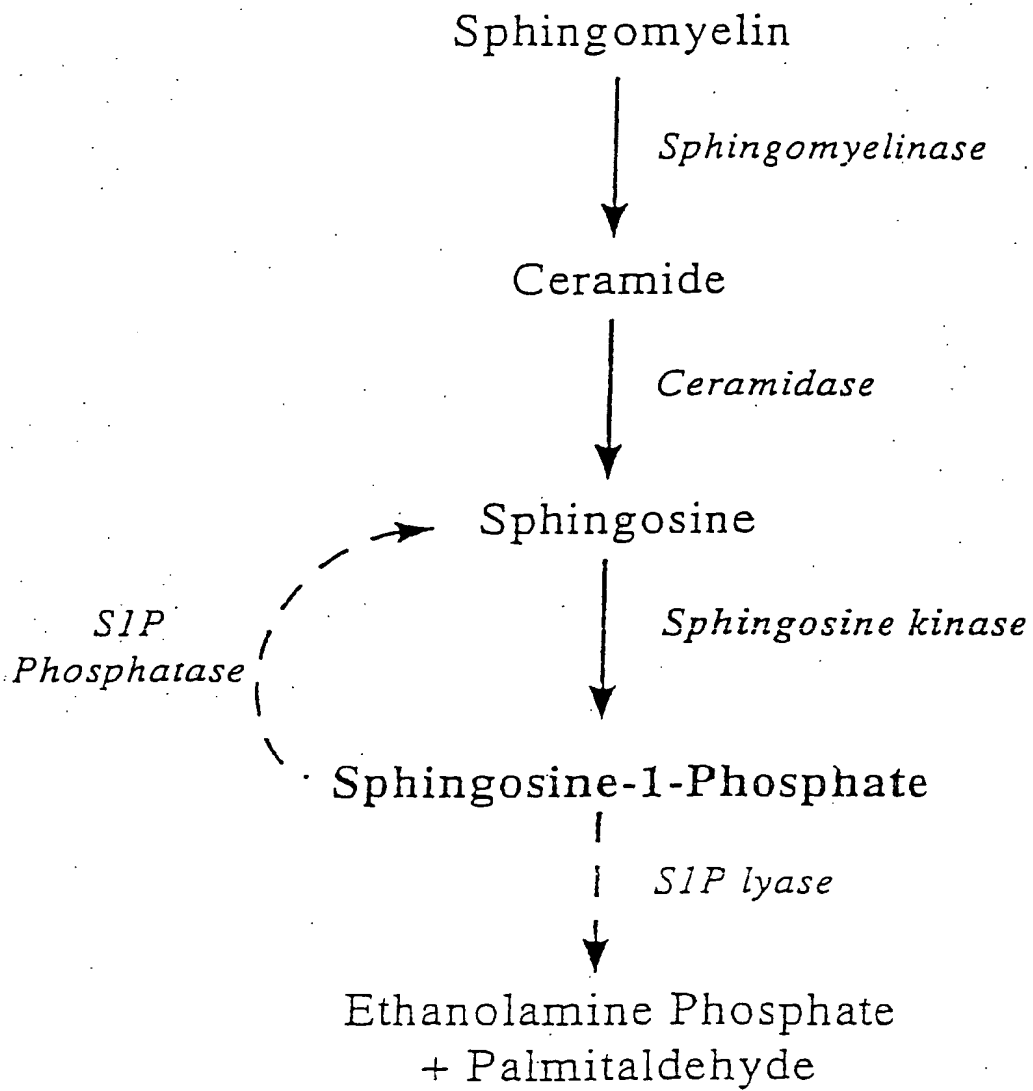


Figure 1

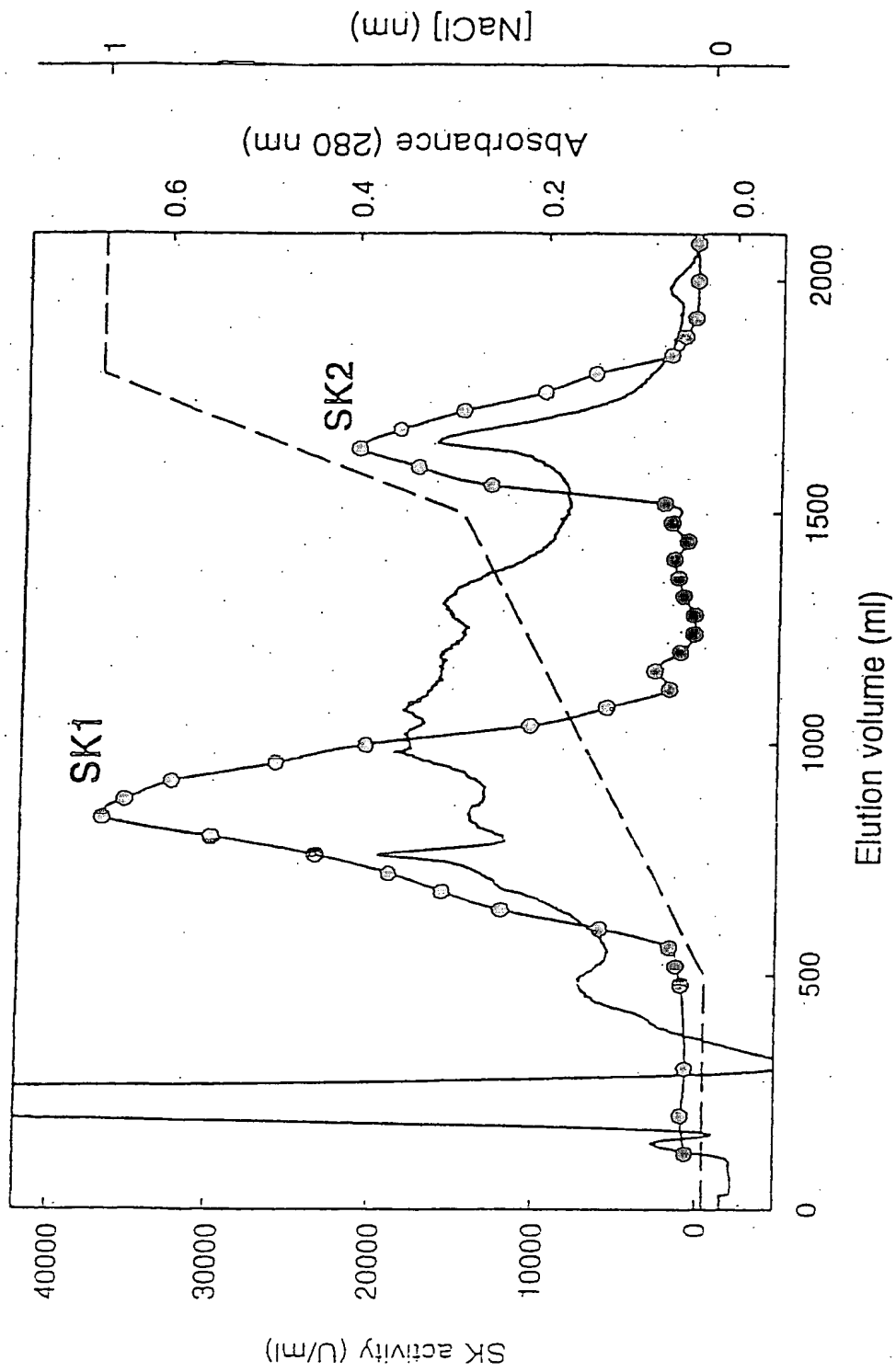


Figure 2

Figure 3A

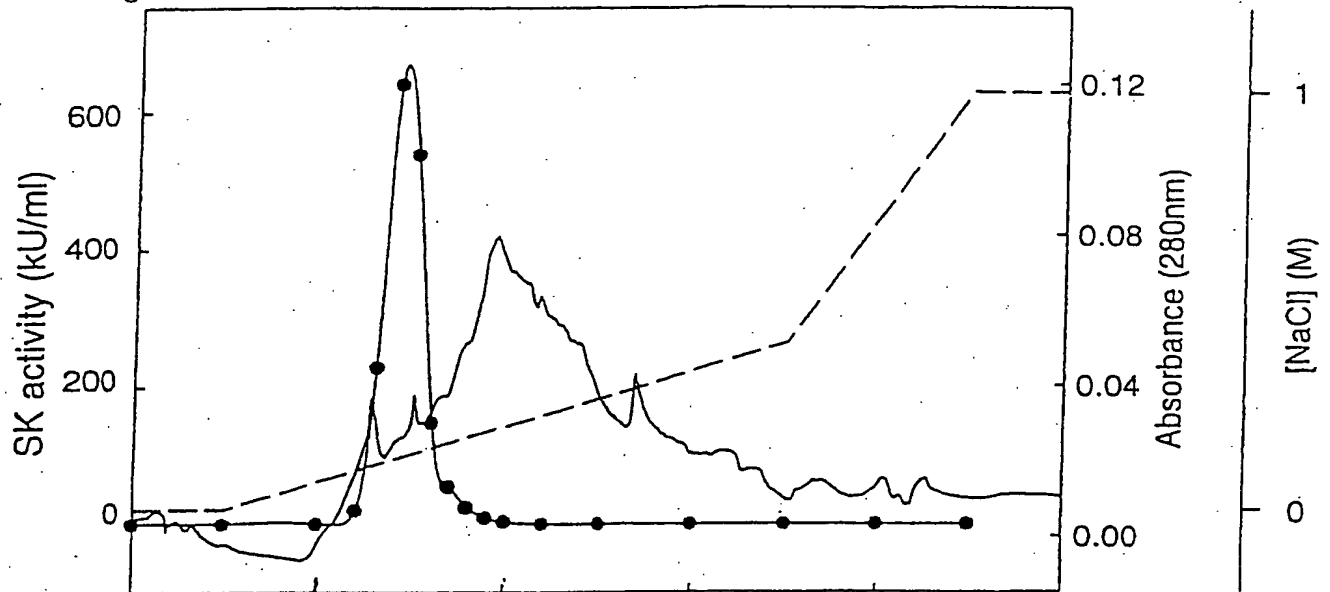
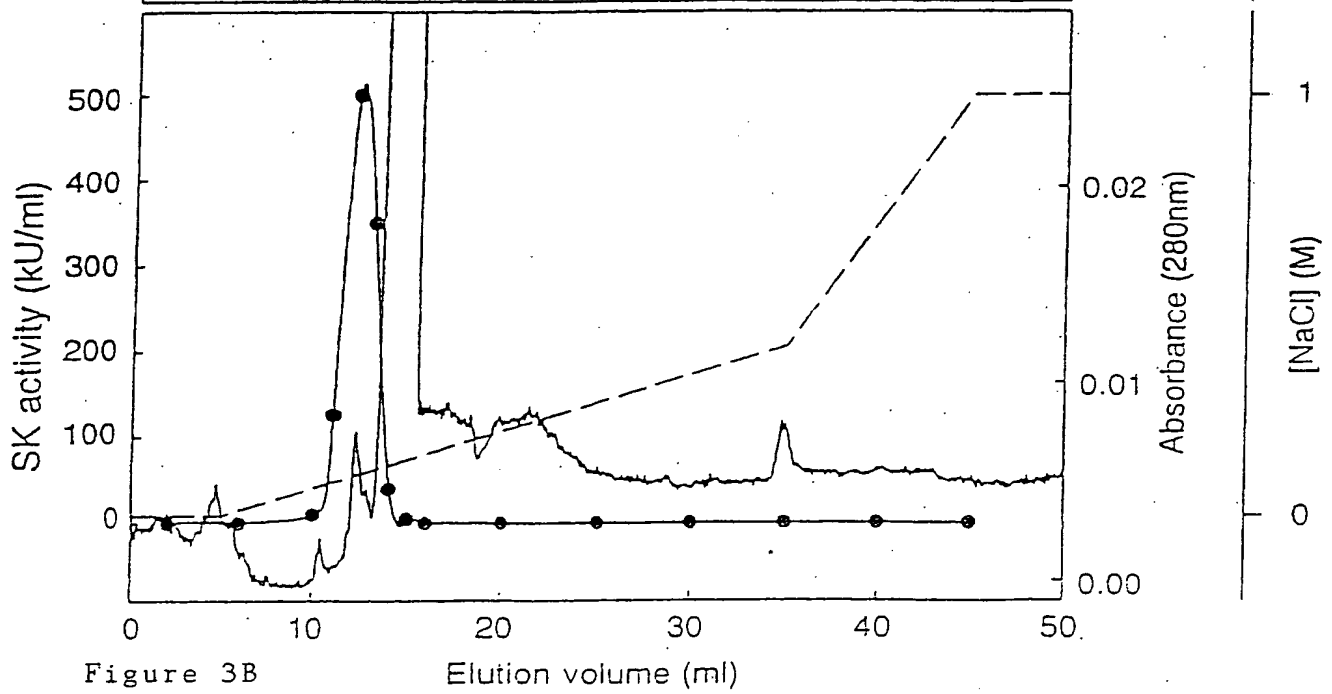


Figure 3B



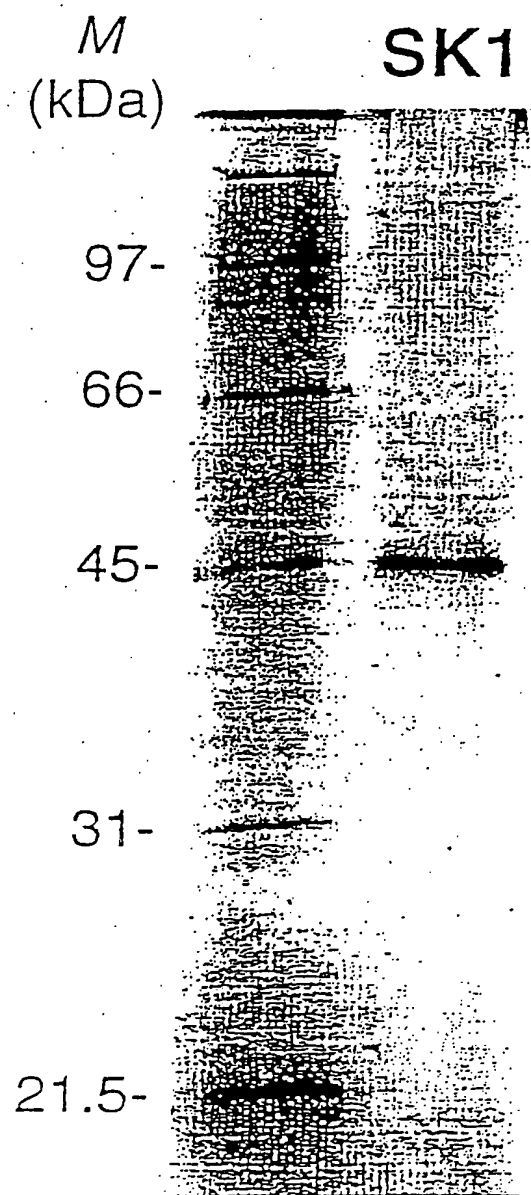


Figure 4

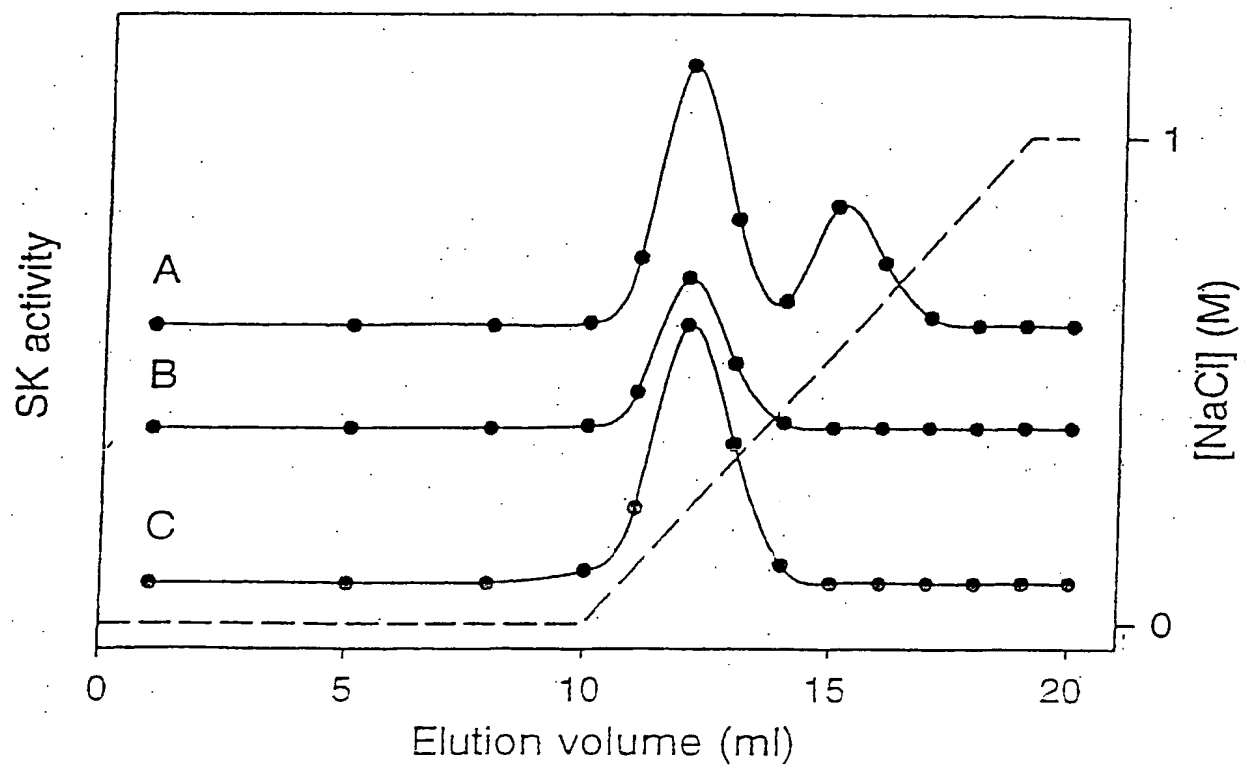


Figure 5

# Cloning of HUVEC SK

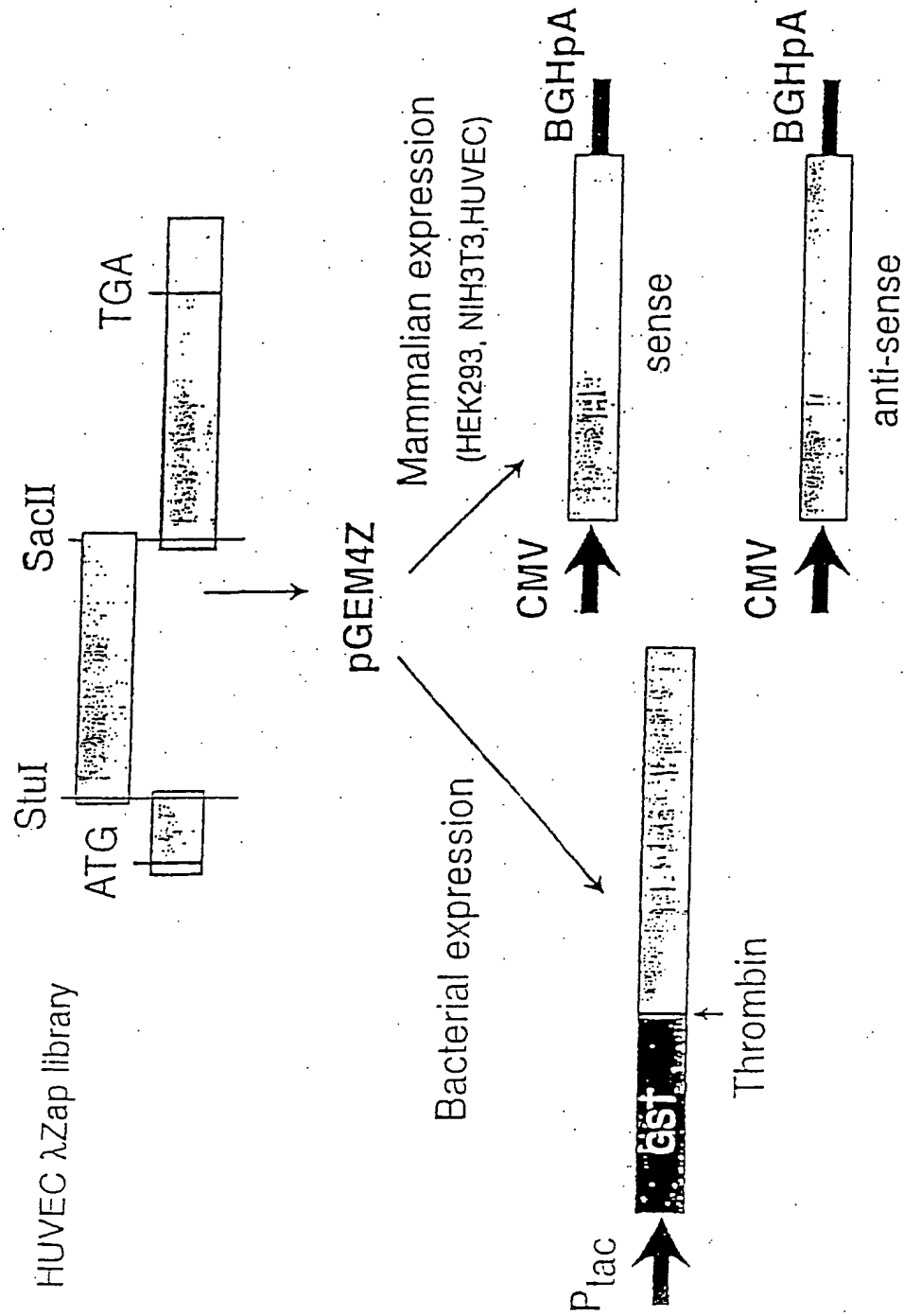


Figure 6

```

1      M D P A G G P R G V L P R P C R V L V      19
1 gagccgcgggtcgaggttATGGATCCAGCGGGGCCCCCGGGGGGTGCTCCCGGGCCCTGCCGCTGGTG 75

20 L L N P R G G K A L Q L F R S H V Q P L L A E      44
76 CTGCTGAACCCGCGGGCAAGGCAAGCCCTTGCAGCTCTTCGGAGTCACGTGCAGCCCCCTTTGGCTGAG 150

45 A E I S F T L M L T E R R N H A R E L V R S E E L      69
151 GCTGAATCTCCTTCACGCTGATGCTCACTGAGCGGGGAAACACGCGGGAGCTGGTGGGTCCGAGGAGCTG 225

70 G R W D A L V V M S G D G L M H E V V N G L M E R      94
226 GGCCGCTGGGACGCTCTGGTTCATGTCTGGAGACGGGCTGATGCACGAGGTGGTGAACGGGCTCATGGAGCGG 300

95 P D W E T A I Q K P L C S L P A G S G N A L A A S      119
301 CCTGACTGGGAGACCGCCCATCCAGAGCCCCCTGTGTAGCTCCACGAGGCTCTGGCAACGGCTGGCAGCTTC 375

120 L N H Y A G Y E Q V T N E D L L T N C T L L L C R      144
376 TTGAACCATTTATGCTGGCTATGAGCAGGTCACCAATGAAGACCTCTGACCAACTGCACGCTATTGCTGTCCGC 450

145 R L L S P M N L L S L H T A S G L R L F S V L S L      169
451 CGGCTGCTCACCCATGAACCTGCTCTCTGCACACGGCTTCGGGGCTGGCCCTCTCTCTGTGCTCAGCCCTG 525

170 A W G F I A D V D L E S E K Y R R L G E M R F T L      194
526 GCCTGGGGCTTCATTGCTGATGTGGACCTAGAGAGTGAGAAGTATCGGGCTCTGGGGGAGATCGGCTTCACTCTG 600

```

Figure 7A-1



```

195 G T F L R L A A L R T Y R G R L A Y L P V G R V G 219
601 GGCAC TTCTCCTGCGTCTGGCAGCCTTGCGCACTTACCGGGCCGACTGGCTTACCTCCCTGTAGGAAGAGTGGGT 675

220 S K T P A S P V V V Q Q G P V D A H L V P L E E P 244
676 TCCAAGACACCTGCCCTCCCCCGTTGTGGTCCAGCAGGGCCCCGGTAGATGCACACCTTGTGCCACTGGAGGAGCCA 750

245 V P S H W T V V P D E D F V L V L A L L H S H L G 269
751 GTGCCCTCTCACTGGACAGTGGTGCCCGACGAGGACTTTGTGCTAGTCCCTGGCACTGCTGCACCTGCACCTGGGC 825

270 S E M F A A P M G R C A A G V M H L F Y V R A G V 294
826 AGTGAGATGTTTGCTGCACCCATGGGCGCTGTGCAGCTGGCGTCATGCATCTGTTCTACGTGCGGGCGGAGTG 900

295 S R A M L L R L F L A M E K G R H M E Y E C P Y L 319
901 TCTCGTGCCATGCTGCTGCGCCTCTTCCTGGCCATGGAGAAGGCAGGCATATGGAGTATGAATGCCCTACTTG 975

320 V Y V P V V A F R L E P K D G K G M F A V D G E L 344
976 GTATATGTGCCCCGTGGTCGCCCTCCGCTTGGAGCCCCAAGGATGGGAAAGGTATGTTTGCAGTGGATGGGAATTG 1050

345 M V S E A V Q G Q V H P N Y F W M V S G C V E P P 369
1051 ATGGTTAGCGAGGCCGTGCAGGGCCAGGTGCACCCAAACTACTTCTGGATGGTTCAGCGGTTGCGTGGAGCCCCCG 1125

370 P S W K P Q Q M P P P E E P L 384
1126 CCCAGCTGGAAGCCCCCAGCAGATGCCACCGCCAGAGAGCCCTTatga 1173

```

Figure 7A-2

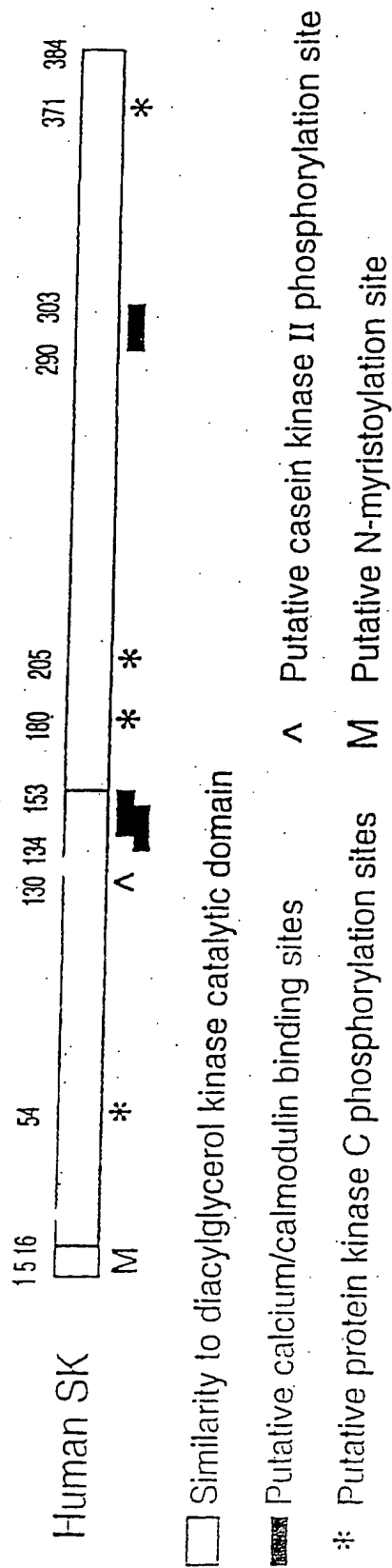
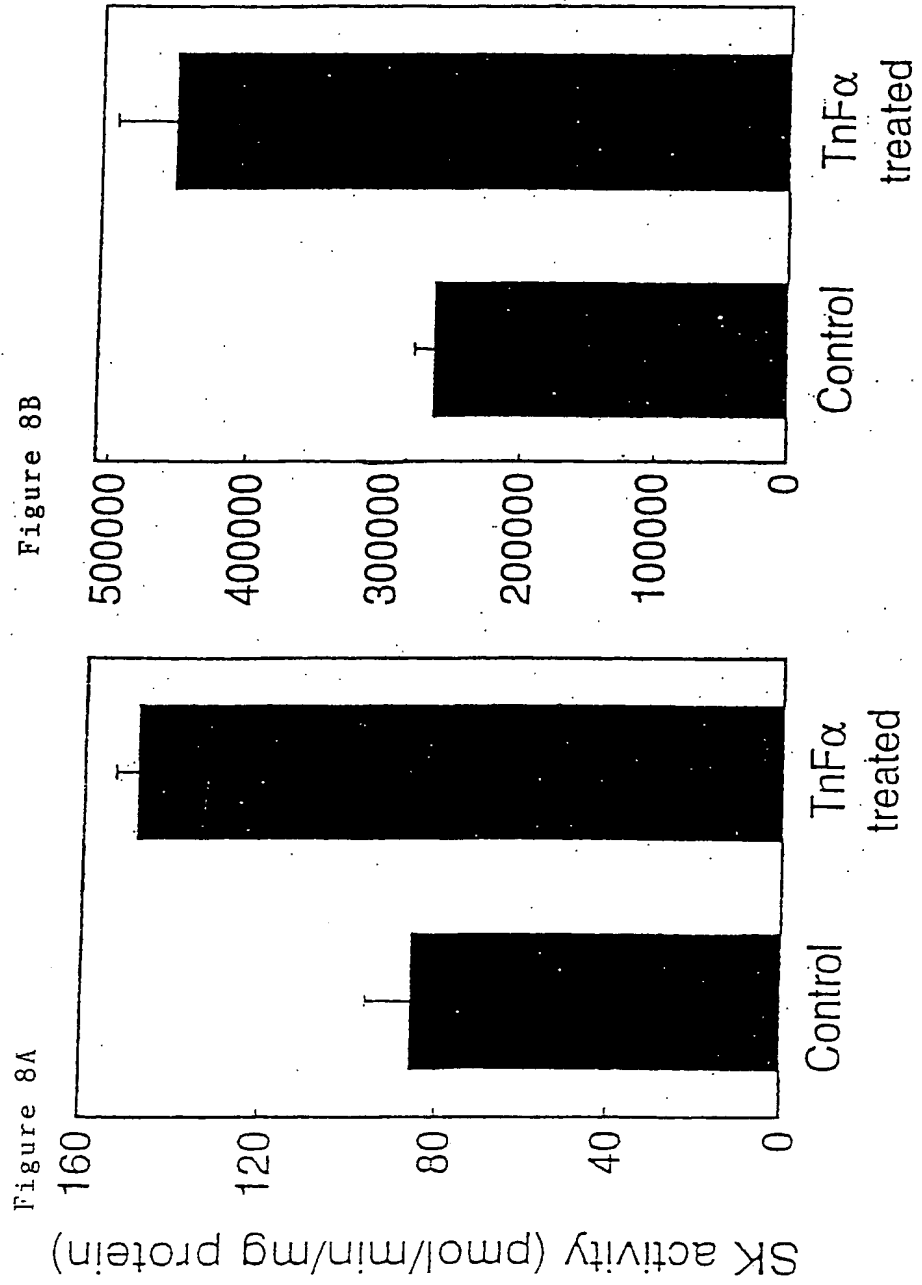


Figure 7B



hSK	1	.....MDPAGGPRGVLP	RPCRVLV	LLNPR	GGKGKALQL	FRSHVQ	PL	LAEAEIS
mSK1a	1	.....MEPECPRGLLP	PCRVLV	LLNPQ	GGKGKALQL	FQSRVQ	PF	LEAEAIT
mSK1b	1	MWCCVL	FVVECP	RGLLP	PCRVLV	LLNPQ	GGKGKALQL	FQSRVQ
Yeast LCB4	206	NISSGT	VEEILEKSYEN	SKRNR	SILV	IINPH	GGKGKALQL	FQSRVQ
Yeast LCB5	252	DL	...VEEIL	KRSYK	NRNKS	IFV	IINPH	GGKGKALQL
S. pombe	90	.....FCEYLL	DVAYK	GIGK	RRR	FIV	IINPH	GGKGKALQL
C. elegans	63	ENEQLTS	VILSRK	PPPEQ	CRGNLL	VFINP	NSGT	GKSLET
Consensus		.....*	.....R	...*	**V	*NP	GGKGA	..*F
								..*P
								..*L
								..*
hSK	112	SGNALAAS	LNHYAG	YEQVT	NEDLL	TNCT	LLCRR	...LLSP
mSK1a	111	SGNALAAS	VNHYAG	YEQVT	NEDLL	INCT	LLCRR	...RLSP
mSK1b	118	SGNALAAS	VNHYAG	YEQVT	NEDLL	INCT	LLCRR	...RLSP
Yeast LCB4	325	SGNAMSIS	.....CHWT	NNPS	YAA	CLVK	SIET	RIDL
Yeast LCB5	368	SGNAMSIS	.....CHWT	NNPS	YST	CLIK	SIET	RIDL
S. pombe	203	SGNAF	FSYN	.....ATG	QLK	PALT	AL	EILK
C. elegans	184	SGNGLLCS	V..LSKY	GTKM	NEKSV	MERAL	EIAT	SPTAKA
Consensus		SGNA*	..S	.....*	L	..*	.....M	.....

Figure 9A

hSK	211	.....AYLP.....	VGRVGSKTPASPVVVQQGPVD
mSK1a	210	.....AYLP.....	VGTVASKRPAST.LVQKGPVD
mSK1b	217	.....AYLP.....	VGTVASKRPAST.LVQKGPVD
Yeast LCB4	435	ENKDKNKGCLTFEP...NPSNSSPDLLSKNNINNSTKDE.....	
Yeast LCB5	478	EH..KNKGSLEFQHITMKNKDNECDNYYENEYETENEDEDADADDEDSHLIS	
S. pombe	308	.....EKSKNLAPMSESSDSK.....	
C. elegans	284	.....TYRPHYKPGFHPSSNVFSVYEKTTQQRIDDSKVKTNGSVSDSEETME	
Consensus		.....*	
hSK	282	AGVMHLFYV..RAGVSRAMLLRLFLAMEKGRHMEYEC	PYL VYVPVVAFRLEPKDG
mSK1a	280	AGVMHLFYV..RAGVSR AALLRLFLAMQCKHMELDCC	PYL VHVVPVVAFRLEPRSQ
mSK1b	287	AGVMHLFYV..RAGVSR AALLRLFLAMQCKHMELDCC	PYL VHVVPVVAFRLEPRSQ
Yeast LCB4	532	DGTIDLVTDAVIPVTR..MTPILLSLDKGSH..VLEPEVIHSHKILAYKII	PKVE
Yeast LCB5	586	DGTMDMVTDAARTSLTR..MAPILLGLDKGSH..VLQPEVLHSHKILAYKII	PKLG
S. pombe	367	DGLIDVVI VYSKQFRKS..LLSMFTQLDNCGF..YYSKHLNYYKVR SFRFT	PVNT
C. elegans	388	DNRIHLSYILWKDIGTRVNIAKYLLAIEHETELDL..PFVKHVEVSSMKLEIVISE	
Consensus		.G.*.....*R...*.L**..G.H.....P.*...*...*	

Figure 9B

```

FTLMLTERRNNHARE.LVRSEELGRWDALVVMSCDGLMHVNVNGLMERPDWETAI.QKPLCSLPAG
FKLILTERKNNHARE.LVCAEELGHWDALAVMSCDGLMHVNVNGLMERPDWETAI.QKPLCSLPAG
FKLILTERKNNHARE.LVCAEELGHWDALAVMSCDGLMHVNVNGLMERPDWETAI.QKPLCSLPAG
IEIAYTKYARHAID.IAKDLDISKYDTIACASGDGIPYEVINGLYRRPDRVDAFNKLAVTQLPCG
IEVVYTKYPGHAIE.IAREMDIDKYDTIACASGDGIPHEVINGLYQRPDVKAFNNIAITEIPCG
CEVLTTRKDHAKS.IAKNLDVGSYDGLSVGGDGLFHEVINGLGERDDYLEAF.KLPVCMIPCG
YEVVVTTGPNHARNVMTKADLGKFNGLVILSGDGLVFEEALNGILCREDAFRIFPTLPIGIVPSC
...T....HA.*.*.*.*.*D.*.*SGDG*.EV*NGL..R.D...A...*P.G

FVLSLAWGFIAVDVLESEKYYR.LGEMRFTLGTFLRLAALRTYRGRL.....
YSVLSLSWGFVADVVDLESEKYYR.LGEIRFTVGTFFRLASLRIYQGQL.....
YSVLSLSWGFVADVVDLESEKYYR.LGEIRFTVGTFFRLASLRIYQGQL.....
LSFLSQTYGVIAESDINTE.FIRWMGCVRFNLGVAFNIIQKKYPCFVVKYAAKSKKELKVHFL
LSFLSQTYGLIAETDINTE.FIRWMGCVRFELGVAFNIIQKKYPCFVVKYAAKSKNELKNHYL
YSELTANYGIIADCIDIGTE.NWRFMGENRAYLGFLLRLFQKPDWKCSIEMDVVSSDRTEIKHMY.
ASFLSIGWGLMADIDIDSEKWRKSLGHRRFTVMGFI RSCNLRSVKGRL.....
.S.LS.**G.*A*.D.**E.*.R.*G..RF.*G.....*Y.*

```

Figure 9C

Figure 9D

Figure 10A

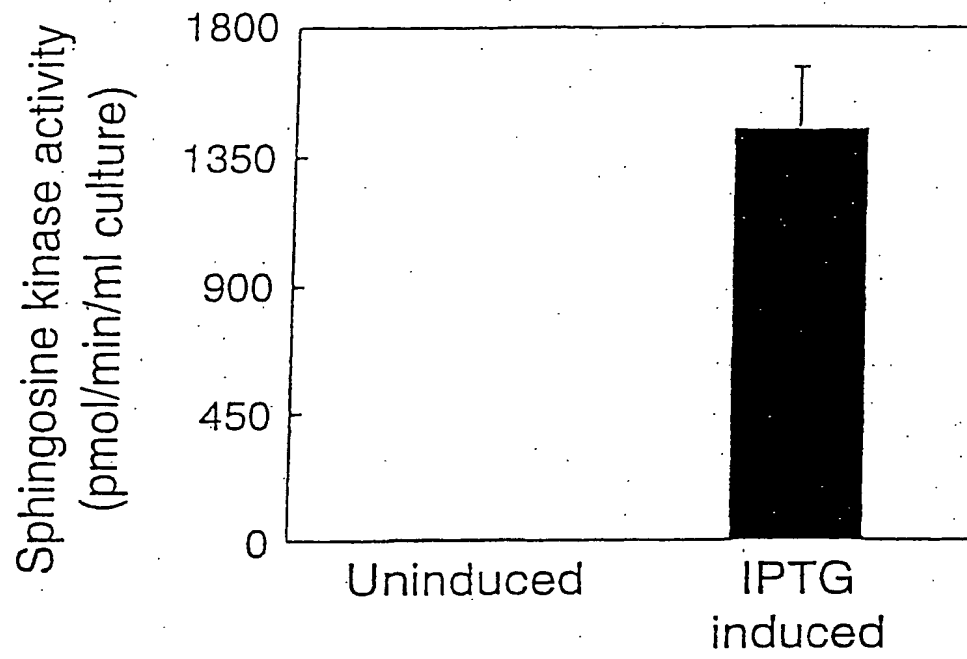


Figure 10B

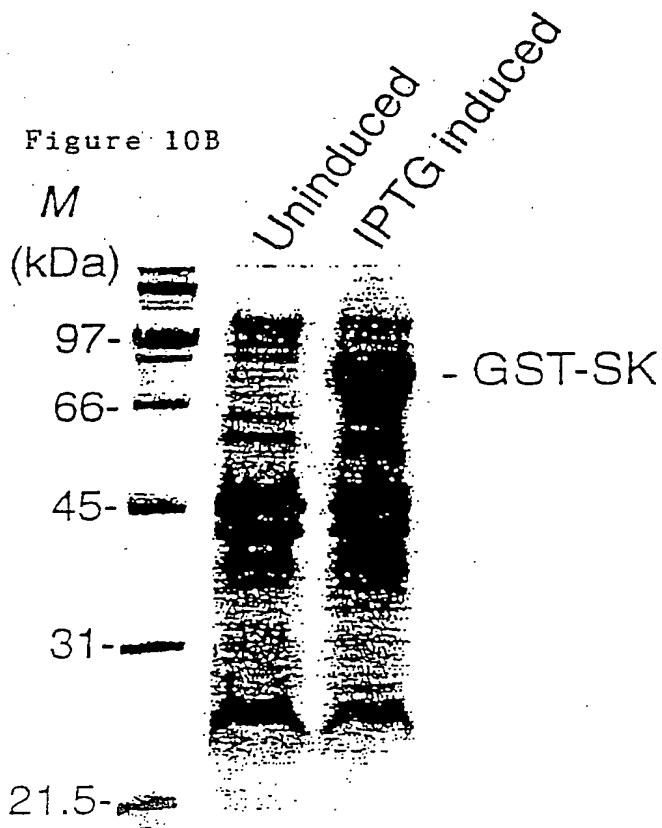
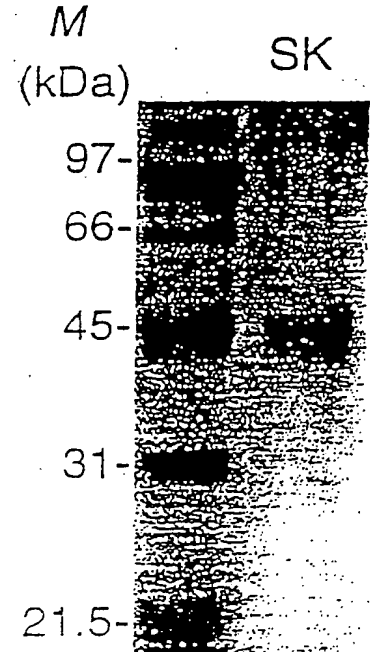


Figure 10C





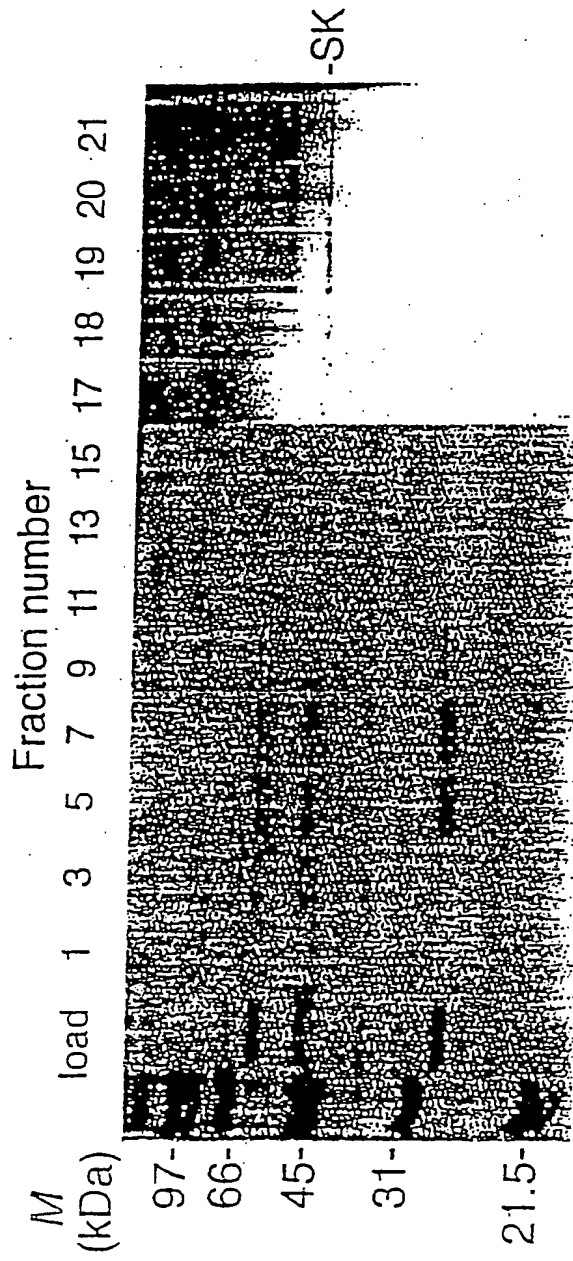


Figure 11A

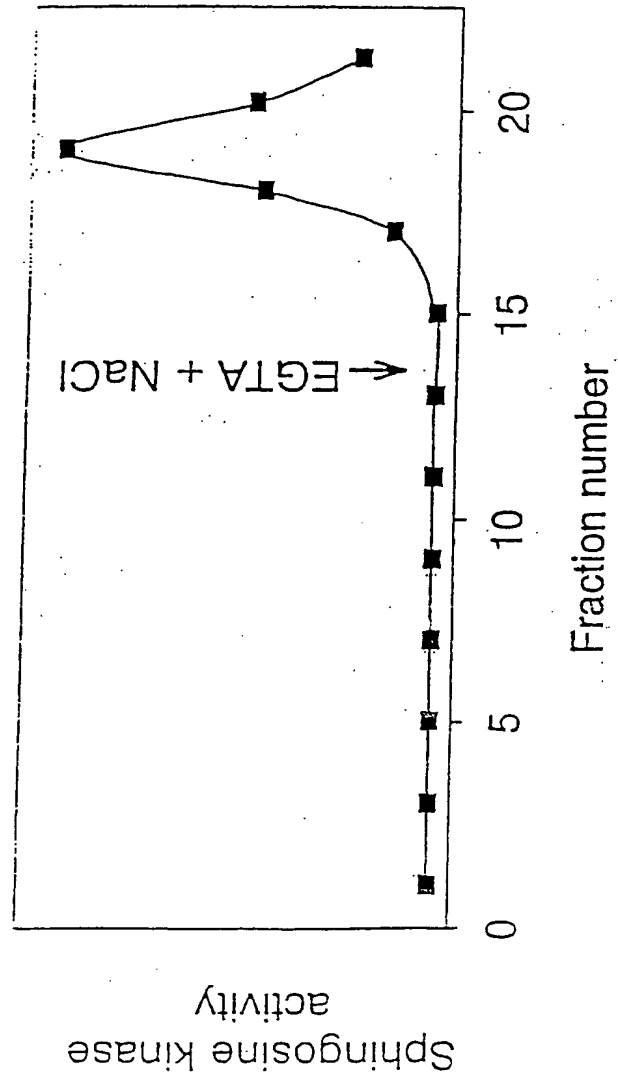


Figure 11B

Figure 12A

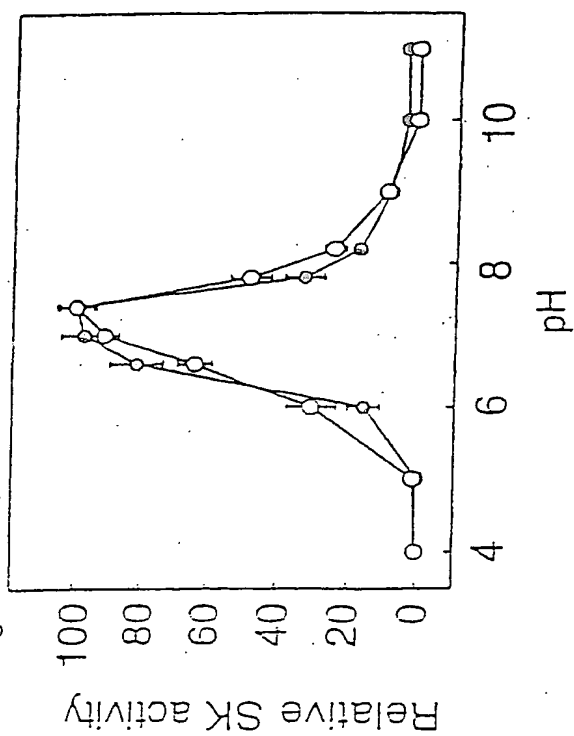


Figure 12B

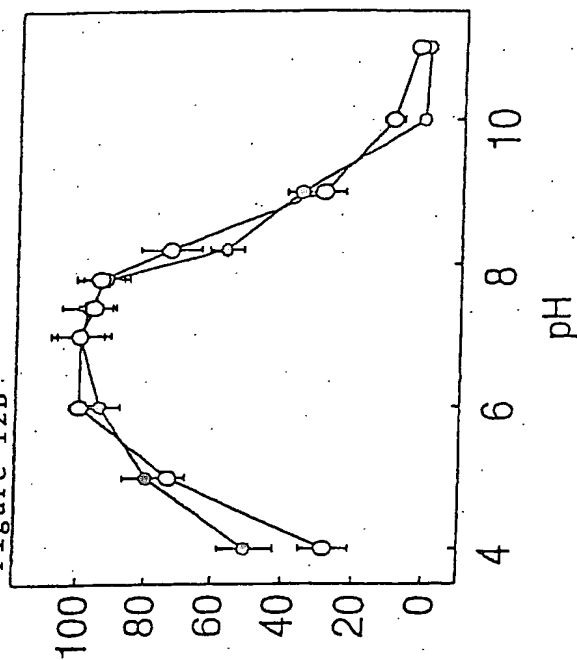


Figure 12C

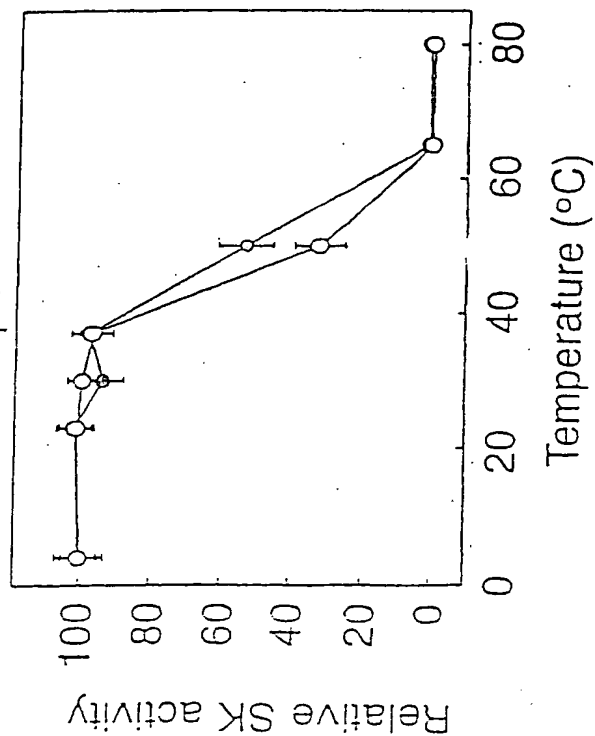
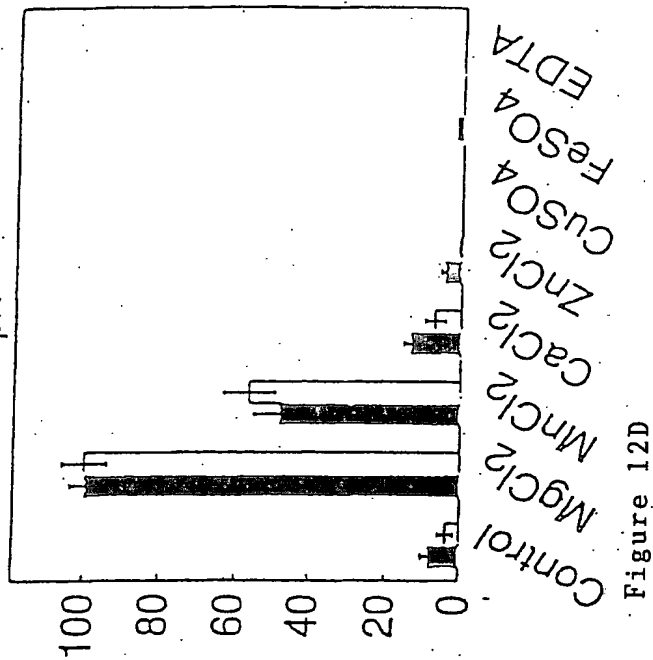
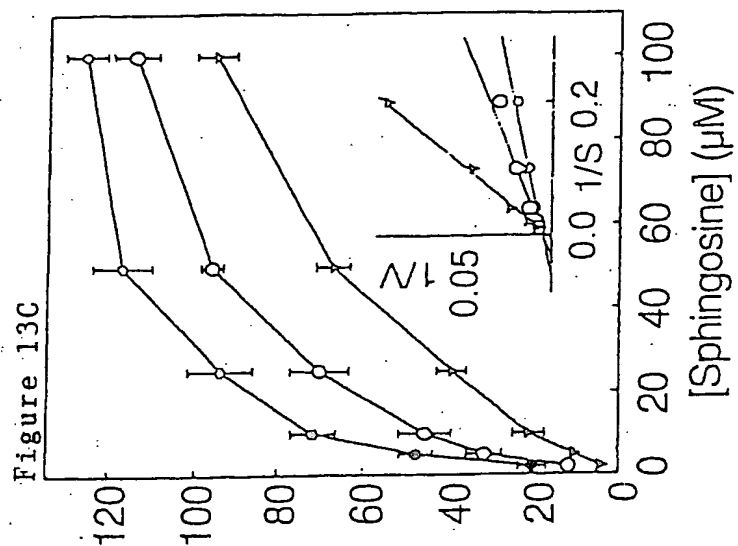
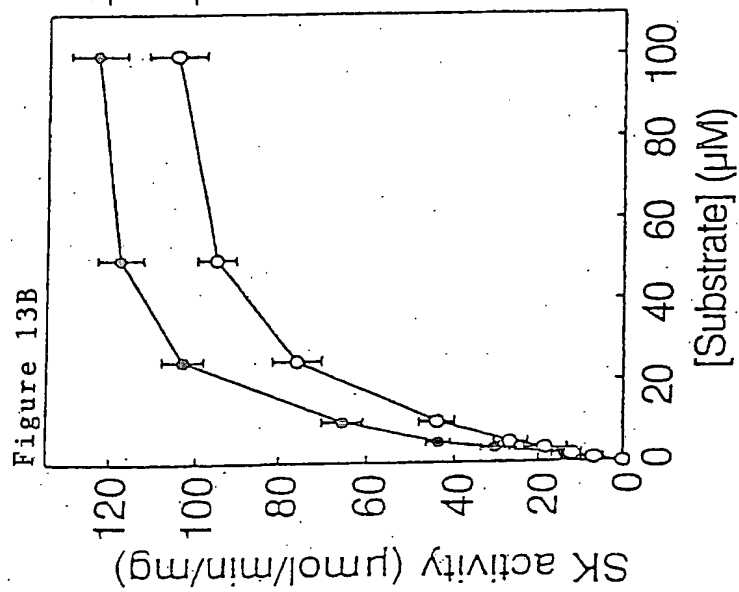
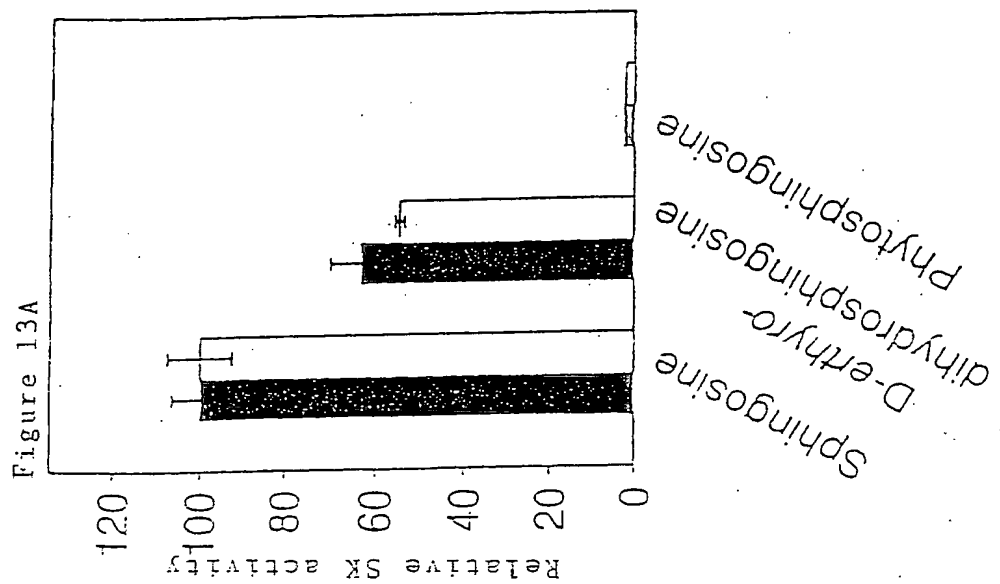


Figure 12D





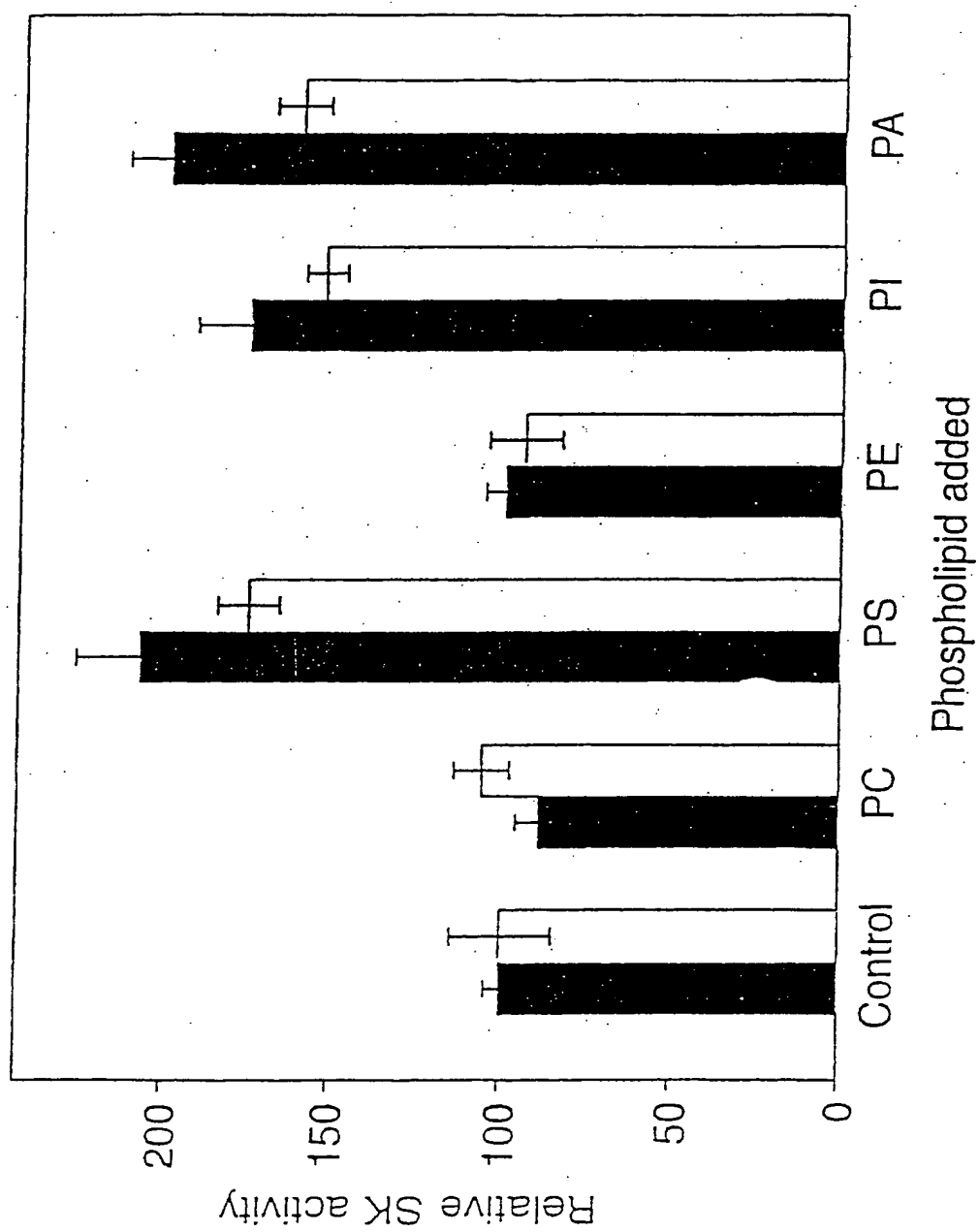


Figure 14